

September 5, 2002

MEMORANDUM

To: Mr. Dalton B. Floyd, Jr., Chairman, and Members, Commission on Higher Education

From: Ms. Dianne Chinnes, Chairman, Committee on Academic Affairs and Licensing

Analyses of Eleven New Program Proposals

Please find attached the staff summaries and analyses for eleven new program proposals, Agenda item 3.02.A.1-11.

At its meeting on June 18, 2002, the Committee on Academic Affairs and Licensing reviewed two new program proposals: agenda items 3.02.A.6 and 9, a joint program between S.C. State University and the University of Wisconsin-Madison leading to a B.S., degree in Nuclear Engineering, and the M.Engr., M.S., and Ph.D. degree programs in Nuclear Engineering at USC-Columbia. The remaining program proposals will be considered by the Committee on Academic Affairs and Licensing at its meeting on September 4 and their recommendation will be made to the Commission on September 5.

As always, please do not hesitate to call me or Dr. Gail Morrison should you have any questions or concerns about our analyses or recommendations.

New Program Proposal

**Associate in Health Science degree with a major in Radiologic Technology
Technical College of the Lowcountry**

Summary

The Technical College of the Lowcountry requests approval to offer a program of study leading to the Associate in Health Science degree with a major in Radiologic Technology, to be implemented in Fall 2003.

The proposed program was approved by the Technical College of the Lowcountry on January 2, 2002. It was approved by the State Board for Technical and Comprehensive Education on March 26, 2002. It was received by the Commission for review on April 8, 2002, and was approved without substantive comment by the Advisory Committee on Academic Programs on July 25, 2002.

The program proposal is appropriate to the mission of the institution as a two-year technical college seeking to provide relevant programs for employment and health promotion in its service area. The need for the program is said to be growing in the Lowcountry region, in the state of South Carolina, and throughout the United States.

The study of need which the institution conducted as part of the program development process showed that as long ago as 1996 there was a statewide demand for 310 more radiologic technicians than the supply could provide. Beaufort County and the four county region served by the Technical College of the Lowcountry have been experiencing the fastest rate of population growth in the state.

The program will require a minimum of 81 semester hours of coursework. Seventeen new courses will be added to the catalog of the College for delivery of this program. If approved, this program will be the tenth degree program of its type in South Carolina. All nine others are in the technical colleges of the state and all are meeting productivity standards and needs for their areas. The rate of vacancies for radiologic technologists in South Carolina and the United States is high and growing.

The Technical College of the Lowcountry projects a student population for this program of 15 students (16.4 FTE) in the first year, rising to 30 (36.5 FTE) in the second year, 30 (40 FTE) in the third year and thereafter.

According to the proposal, the new program will require a total of two new faculty (2 FTE) positions. In addition, adjuncts will be hired to assist these full-time faculty members, as needed. No new support staff person will be needed.

No new facilities will be needed to accommodate the program during the first three years of its implementation. Additional costs for the new program will total \$549,700 for the first three years of the program's operations. These costs will be for faculty salaries (\$378,300), supplies and materials (\$11,000), library resources (\$2,000), equipment (\$153,400), and the process of accreditation (\$5,000.)

The institution will seek accreditation as soon as notification of approval for the new program has been received. The program accrediting body will be the Joint Review Committee on Education in Radiologic Sciences (JRCERT.)

Shown below are the estimated projections of existing and any new costs associated with implementation of the proposed program for its first three years as compared with the estimated revenues projected under the Mission Resource Requirement and the Resource Allocation Plan.

Year	Estimated MRR Cost for Proposed Program	Extraordinary (Non-MRR) Costs for Proposed Program	Total Costs	State Appropriation	Tuition	Total Revenue
2003-04	\$ 342,248	\$0	\$342,248	\$0	\$44,083	\$44,083
2004-05	676,148	0	676,148	239,571	87,095	326,666
2005-06	676,148	0	676,148	473,283	87,095	560,378

These data demonstrate that even if the Technical College of the Lowcountry can meet the projected student enrollments and contain costs as they are shown in the proposal, the program will not cover new costs with revenues it generates in the first three years of its implementation. Nevertheless, the institution is committed to providing the program with the operating funds it needs to be successful.

In summary, the program is needed, has been supported by the Technical College of the Lowcountry, the State Board for Technical and Comprehensive Education, and the Advisory Committee on Academic Programs.

Recommendation

The staff recommends that the Committee on Academic Affairs and Licensing commend favorably to the Commission approval of the program leading to the Associate in Health Science degree with a major in Radiologic Technology at Technical College of the Lowcountry for implementation in Fall 2003, provided that no "unique cost" or other special state funding be required or requested.

New Program Proposal
Associate in Public Service degree with a major in Human Services
Horry-Georgetown Technical College

Summary

Horry-Georgetown Technical College requests approval to offer a program leading to the Associate in Public Service degree with a major in Human Services, to be implemented in Spring 2003.

The proposed program received institutional approval on October 15, 2001. The State Board for Technical and Comprehensive Education approved it on January 22, 2002. It was received by the Commission for review on February 1, 2002, and was approved without substantive comment by the Advisory Committee on Academic Programs on July 25, 2002.

The purpose of the program is to provide students the opportunity to pursue training in preparation for a career in the human services field as an entry-level generalist. Graduates of the program will be enabled to provide direct services to individuals or groups in need of assistance in a variety of human services.

The program proposal is appropriate for offering within the defined mission of the institution as a technical college which supplies programs for employment of residents in technical specialties needed for the communities in the institution's service area. The need for the program is said to be great in South Carolina and throughout the United States in such settings as group homes; half-way houses; family, child, and youth services; correctional, mental health, and mental retardation centers; and programs dealing with alcoholism, drug abuse, violence, and aging. The study of need which the institution undertook as part of the program development process showed that the need for the program has increased commensurate with population increase in the Grand Strand region. A total of 69 new full-time positions and 156 full-time position openings from attrition will occur in this area during the first three years of the program's implementation.

The program will require a minimum of 70 semester hours of coursework. Eleven new courses will be added to the College's catalog in order to provide this program's curriculum. This program will be the eighth degree program of its type in South Carolina offered within the technical college system. All existing programs are in good standing and serving employers' needs within their appropriate service areas.

Horry-Georgetown Technical College projects a student population for this program of 30 (39 FTE) students in the first year. The enrollment is estimated to rise to 50 (59.67 FTE) in the second and third years of the program's implementation.

According to the proposal, the new program will require a total of one new full-time faculty position in the first year. In the second and third years of the program's operations, an adjunct faculty member will also be added. No new support staff person will be necessary for the program's operations.

There will be no new facilities needed in order to accommodate the new program. According to the proposal, additional costs for the new program will total \$260,356 for the first three years of the program's operations. These costs will be for faculty salaries (\$237,356), supplies and materials (\$3,000), and library resources (\$20,000.)

The institution will apply for accreditation upon receiving confirmation of program approval. Accreditation will be sought through the Council for Standards in Human Services Education (CSHSE.)

Shown below are the estimated projections of existing and any new costs associated with implementation of the proposed program for its first five years as compared with the estimated revenues projected under the Mission Resource Requirement and the Resource Allocation Plan.

Year	Estimated MRR Cost for Proposed Program	Extraordinary (Non-MRR) Costs for Proposed Program	Total Costs	State Appropriation	Tuition	Total Revenue
2003-04	\$223,860	\$0	\$223,860	\$0	\$91,119	\$91,119
2004-05	342,487	0	342,487	124,589	139,344	263,933
2005-06	342,487	0	342,487	190,310	139,344	329,654

These data demonstrate that even if Horry-Georgetown Technical College can meet the projected student enrollments and contain costs as they are shown in the proposal, the program will not cover new costs with revenues it generates throughout the first three years of its implementation. Nevertheless, the institution is committed to providing the program with the operating funds it needs to be successful.

In summary, the program is needed. It has been supported by Horry-Georgetown Technical College, the State Board for Technical and Comprehensive Education, and the Advisory Committee on Academic Programs. Other programs like it are all in good standing.

Recommendation

The staff recommends that the Committee on Academic Affairs and Licensing commend favorably to the Commission approval of the program leading to the Associate in Public Service degree with a major in Human Services at Horry-Georgetown Technical College for implementation in Spring 2003, provided that no “unique cost” or other special state funding be required or requested.

New Program Proposal
Bachelor of Arts in Comparative Literature
University of South Carolina-Columbia

Summary

USC-Columbia requests approval for a new program leading to the Bachelor of Arts in Comparative Literature degree, to be implemented in Spring 2003.

The University's Board of Trustees approved the program on June 27, 2002. The Commission's Advisory Committee on Academic Programs reviewed the proposal at its July 25, 2002, meeting and, without substantive comment, voted unanimously to approve the program.

Comparative literature requires the study of literature from a cross-cultural perspective, meaning, in the case of the proposed program, that students study literary texts in at least two languages. According to the proposal, the new B.A. in Comparative Literature will provide students with "a broad grounding in world literature, literary criticism, and research methods." Students who graduate from the proposed B.A. in Comparative Literature will be able to pursue graduate study in the field or in other closely related fields (e.g., languages, English, cultural studies, etc.). Also, USC makes a compelling argument in the proposal that the major can serve as "a valuable avenue for a truly multicultural and cross-linguistic education." Given the diversity in South Carolina's population and the state's increasing dependence on global trade, such an "avenue" is a necessity for educating public leaders who are capable of addressing the state's role in the world in a thoughtful, contextual manner.

Depending on their particular area of interest, students in the program will be able to enroll in courses from a number of departments, including English, foreign languages, philosophy, African-American studies, and women's studies. USC will require that students complete at least 120 credit hours for graduation. The curriculum in the major itself requires coursework in comparative literature (Introduction to Comparative Literature, Great Books of the Western World, Great Books of the Eastern World, Topics in Comparative Literature, etc.), foreign language courses in literature at the 300 level or above, literature coursework in another foreign language in translation, and a senior-level thesis. Altogether, coursework in the major totals 27 credit hours. Students must also complete the College of Liberal Arts general education requirements, a cognate or minor area totaling 12-18 credit hours, and elective courses.

Projected enrollment in the program will remain small but within Commission degree program productivity standards. USC projects the program will enroll two new students in Fall 2002, with this number increasing incrementally each year to approximately 15 new students by Fall 2006. Additionally, the University believes that

at least six students will transfer into the major within the first few years of operation. USC projects that all students will enroll on a full-time basis.

USC will divide the faculty in the proposed program into two groups: core faculty members who are required to conduct research and teach in the field on a regular basis and consulting faculty who teach occasionally in the program and are willing to serve on thesis committees. According to the proposal, the comparative literature program currently has 15 core faculty members and 18 consulting faculty who support the existing M.A. and Ph.D. programs at USC-Columbia. Since all courses in the proposed B.A. in Comparative Literature are already being taught, USC projects only minimal reassignment of faculty: 0.33 of a full-time equivalent faculty member will be assigned each semester to teach either CPLT 300, Introduction to Comparative Literature, or CPLT 415, Topics in Comparative Literature, the only courses not cross-listed in other departments at the University. No new faculty hires will be required to implement the program. The program will be administered by a program director who currently oversees the M.A. and Ph.D. programs and who reports to the dean of the College of Liberal Arts.

There are no other baccalaureate comparative literature programs in South Carolina. USC-Columbia offers master's and doctoral programs in the field, which would naturally attract graduates from the proposed B.A. program. In the region, the Universities of Georgia, North Carolina, and Virginia, and Duke University offer baccalaureate programs in comparative literature. As the proposal points out, Georgia UNC-Chapel Hill, and Virginia are all aspirant peers for USC-Columbia.

There are no additional facilities, equipment, accreditation or library costs associated with the proposed program.

Shown below are the estimated Mission Resource Requirement (MRR) costs to the state and new costs not funded by the MRR associated with implementation of the proposed program for its first five years. Also shown are the estimated revenues projected under the MRR and the Resource Allocation Plan as well as student tuition.

Year	Estimated MRR Cost for Proposed Program	Extraordinary (Non-MRR) Costs for Proposed Program	Total Costs	State Appropriation	Tuition	Total Revenue
2002-03	\$15,476	\$0	\$15,476	\$0	\$11,967	\$11,967
2003-04	46,428	0	46,428	9,257	35,009	44,266
2004-05	69,642	0	69,642	28,062	52,959	81,021
2005-06	92,656	0	92,656	41,947	70,908	112,855
2006-07	123,808	0	123,808	55,830	93,951	149,781

These data demonstrate that if USC-Columbia can meet the projected student enrollments and contain costs as they are shown in the proposal, the program will be able to cover new costs with revenues it generates by the third year of its implementation.

In summary, the proposed Bachelor Arts in Comparative Literature program is an important new liberal arts program that will complement existing master's and doctoral programs in comparative literature at USC-Columbia quite well. As noted by the Commission's consultant on comparative literature, hired to review the graduate programs in Fall 2000, "the establishment of an undergraduate major in comparative literature is a logical step, one which could be readily supported by the resources of the department." From a broader perspective, the new program is indeed representative of the programming offered by most nationally prominent research universities that offer comprehensive curricula in the arts and sciences.

Recommendation

The staff recommends that the Committee on Academic Affairs and Licensing commend favorably to the Commission approval of the program leading to the Bachelor of Arts degree in Comparative Literature at the University of South Carolina-Columbia for implementation in Spring 2003, provided that no "unique cost" or other special state funding be required or requested.

Agenda item 3.02.A.4

New Program Proposal **Bachelor of Science in Business Administration** **University of South Carolina-Beaufort**

Summary

USC-Beaufort requests approval for a new degree program leading to the Bachelor of Science in Business Administration with a concentration in Management, to be implemented in Spring 2003.

The University's Board of Trustees approved the proposed new program at its meeting on June 27, 2002. The Commission's Advisory Committee on Academic Programs reviewed the proposal for the B.S. in Business Administration at its meeting on July 25, 2002. At that meeting, discussion centered on the ability of USC-Beaufort to obtain accreditation for the proposed new program through the Association to Advance Collegiate Schools of Business (AACSB) and the institution's ability to provide adequate library resources for the program. Representatives from USC-Beaufort responded that they would indeed seek AACSB accreditation for the B.S. in Business Administration and that additional funds are being allocated to underwrite necessary library enhancements. The Advisory Committee approved the proposed program with one member abstaining.

The proposed new degree program will be the first baccalaureate degree program offered by USC-Beaufort in context of its new four-year status. USC-Beaufort proposes to offer the program at its Beaufort campus and is requesting approval for offering the program at the New River campus, now under construction, as well. According to the proposal, the B.S. in Business Administration with a concentration in Management will meet a growing need for trained professionals in management in the Beaufort service region. While the program curriculum will focus on small business management and entrepreneurship, graduates from the degree program will be able to find employment within the service area in a number of business and corporate settings. It is important to note that the proposed program is almost identical to the existing degree program leading to the B.S. in Business Administration currently offered by USC-Aiken at the Beaufort campus. Students will have the option to remain in the USC-Aiken degree program through December 2003, but no new students will be admitted to the USC-Aiken program as of January 2003. Students in the USC-Aiken program who do not graduate by December 2003 will have the option of transferring into the new USC-Beaufort program.

The curriculum for the proposed new B.S. in Business Administration with a concentration in Management is in keeping with most degree programs in the field. Students will complete 120 credits hours for graduation. These credits are broken out in

the following fashion: 60 credit hours of general education; 39 credit hours of core business coursework (e.g., accounting, finance, management, marketing, etc.); 18 credit hours in the management concentration; and, three hours of business electives. The entire curriculum for the degree program will remain unchanged from the current USC-Aiken degree program with the exception of changes to the prefixes of the courses from USC-Aiken to USC-Beaufort nomenclature.

Currently, no other public institutions offer a degree in business administration in the Beaufort service region. Park University and Embry-Riddle Aeronautical University offer coursework leading to baccalaureate degrees in business administration on military bases in the Beaufort area, but neither offers a concentration in management. Webster offers a master's degree in business administration on Parris Island.

USC-Beaufort bases its projections for enrollment in the program on recent enrollments in the USC-Aiken program together with a five percent per year increase. New student enrollments are slated to begin at 83 full-time equivalent (FTE) students with the inception of the program in Spring 2003 and increase incrementally each year over the first five years of operation to 106 FTE's by Fall 2007.

Since the existing faculty members in business at USC-Beaufort are already teaching the classes required for the USC-Aiken degree program, very little change in faculty workload will be required to implement the proposed B.S. in Business Administration. USC-Beaufort will add one additional faculty member prior to January 1, 2003, whose faculty load will encompass 0.25 FTE in administration (serving as program director) and 0.75 FTE of teaching in the program. According to the proposal, this individual will possess the Ph.D. in Management.

No new equipment or facilities will be required to implement the proposed new B.S. in Business Administration with a concentration in Management. While the program will be offered at the New River campus, which is currently under construction, funding for the facilities that will house the program at New River is already in hand. Owing to increases in enrollment and in anticipation of AACSB accreditation requirements, USC-Beaufort projects \$21,000 in enhancements to its library holdings in business administration over the first five years of the program's operation. This amount is over and above the amounts already allocated in support of the USC-Aiken business program at Beaufort, which, according to the proposal, received AACSB approval during the last accreditation cycle at USC-Aiken.

USC-Beaufort asserts that it will begin the process of seeking accreditation through AACSB in 2003 given that AACSB requires that a program graduate students prior to seeking accreditation. According to the proposal, USC-Beaufort will apply first for "pre-candidacy" and anticipates receiving accreditation within seven to eight years after initial implementation of the B.S. program (2010-11), in keeping with AACSB timelines.

New costs for the proposed program are significant in large part because USC-Beaufort will be taking over the salaries of faculty who are currently teaching upper-division courses in business administration in the USC-Aiken program. Faculty salaries total just over \$1.3 million over the first five years of the program's operation. Importantly, USC-Beaufort will use funds allocated from Beaufort County in support of the institution's conversion to a four-year campus to support new costs.

Shown below are the estimated Mission Resource Requirement (MRR) costs to the state and new costs not funded by the MRR associated with implementation of the proposed program for its first five years. Also shown are the estimated revenues projected under the MRR and the Resource Allocation Plan as well as student tuition.

Year	Estimated MRR Cost for Proposed Program	Extraordinary (Non-MRR) Costs for Proposed Program	Total Costs	State Appropriation	Tuition	Total Revenue
2002-03	\$459,080	\$0	\$459,080	\$0	\$185,127	\$185,127
2003-04	830,760	0	830,760	322,625	335,047	657,672
2004-05	871,240	0	871,240	583,792	351,148	934,940
2005-06	916,320	0	916,320	612,449	369,214	981,663
2006-07	967,840	0	967,840	644,235	390,285	1,034,520

These data demonstrate that if USC-Beaufort can meet the projected student enrollments and contain costs as they are shown in the proposal *absent additional revenues*, the program will be able to cover new costs with revenues it generates by the third year of its implementation.

In summary, the B.S. in Business Administration at USC-Beaufort is an appropriate degree program for USC-Beaufort to offer as its first stand-alone baccalaureate program for a number of reasons: 1) coursework and faculty for the program are substantially in place due to the existence of the business program offered at Beaufort by USC-Aiken; 2) enrollment projections for the proposed program are healthy and reasonably derived given recent enrollments in the USC-Aiken program; and, 3) the new B.S. in Business Administration with a concentration in Management will help support USC-Beaufort's new mission as a four-year degree-granting institution by supporting the growing business community in the Beaufort region, a main proponent of four-year status.

Recommendation

The staff recommends that the Committee on Academic Affairs and Licensing commend favorably to the Commission approval of the program leading to the Bachelor of Science degree in Business Administration with a concentration in Management at the University of South Carolina-Beaufort, to be implemented in Spring 2003 on the Beaufort and New River campuses, provided that no “unique cost” or other special state funding be required or requested.

New Program Proposal
Bachelor of Science in Middle Level Education
Winthrop University

Summary

Winthrop University requests approval to offer a program leading to the Bachelor of Science degree in Middle Level Education, to be implemented in Spring 2003.

The Board of Trustees approved the proposal on April 12, 2002. This proposal was submitted for Commission review on May 15, 2002. The proposal was reviewed without substantive comment and voted upon favorably by the Advisory Committee on Academic Programs at its meeting on July 25, 2002.

The purpose of the program is to train teachers to serve in the grade spans of the middle school by offering specialized training focused on the unique needs of adolescents. The need is based on the new middle-level certification requirements of the State Board of Education. In January 2002, the State approved middle-level certification of teachers, and there is a great need for the specialized training required to attain this certification. After September 1, 2005, any graduate of a teacher education program wishing to teach in grades 5-8 must complete an approved middle level teacher education program. This fast approaching deadline has created a sense of urgency in the State because of the expected high retirement rate over the next five years of currently practicing teachers. This proposal represents Winthrop's response to this need by developing an appropriate middle-level teacher education program designed to lead to initial certification. There are 17 middle schools in the Winthrop Olde English Consortium with approximately 600 teachers. The anticipated retirement rate of these teachers is 10-15 percent per year creating a great need for teachers trained for the middle level, particularly by the September 2005 certification requirement deadline.

The Commission has already approved two middle-level teacher education programs. These are located at the University of South Carolina-Spartanburg and Coastal Carolina University. Because of the unique demand the new certification requirement places on teacher recruitment, it is very important that the Commission support the development of middle-level programs at the public institutions as noted in the above paragraph. The demand for teachers certified at the middle level will be great, and the institutions have been called upon by both the S.C. Department of Education and the General Assembly to develop programs that will address this need.

The curriculum consists of 134 -135 credit hours. Of these, 59 are in general education, 39 are in professional education, and 36 are in two concentration areas

selected from among science, mathematics, social studies, or English/language arts. Twenty-four credit hours (12 from each concentration area) from general education requirements will be used to support the concentration areas so that each student will have a total of 30 hours in each content area upon completion of the program. The curriculum has been designed to meet the standards of the National Middle School Association, and the S.C. content standards have been used to design the content courses. Four new courses will be required.

Winthrop indicates that one new tenure-track faculty member will be needed for the proposed program. A qualified middle-level educator will be hired during FY 2002-03. Faculty serving the program will begin at three headcount (1.50 FTE) in FY 2002-03 and will increase to 12 headcount (3.50 FTE) in FY 2006-07.

Enrollment in the proposed program is estimated to begin at eight headcount students in FY 2002-03 and increase to 37 headcount students in FY 2006-07. Enrollment estimates are based on approximately 50 percent of the students coming from the University's current education majors to form what the College believes will be a small to medium-sized program. If the enrollment projections are met, the program will meet the current CHE program productivity standards.

The program will be required to obtain accreditation from the National Council for the Accreditation of Teacher Education (NCATE) and meet the standards of the National Middle School Association.

There are no physical plant or equipment needs for the proposed program. A comparison of Winthrop's library holdings and expenditures to holdings and expenditures at institutions in Winthrop's Commission-approved peer group indicates that the University compares favorably, for the most part, with other similar universities around the country. The department in which the proposed program will be housed spent more than \$4,000 last fiscal year on more than 100 volumes related to middle-level education. In addition, Winthrop offers a program leading to the M.Ed. degree in Middle Level Education which has increased subscriptions and materials related to the middle level. New costs are totally for salaries and begin at \$59,000 in FY 2002-03 and increase to \$63,000 in FY 2006-07 for a total of \$305,000.

Shown below are the estimated Mission Resource Requirement (MRR) costs to the state and new costs not funded by the MRR associated with implementation of the proposed program for its first five years. Also shown are the estimated revenues projected under the MRR and the Resource Allocation Plan as well as student tuition.

Year	Estimated MRR Cost for Proposed Program	Extraordinary (Non-MRR) Costs for Proposed Program	Total Costs	State Appropriation	Tuition	Total Revenue
2002-03	\$40,995	\$0	\$40,995	\$0	\$27,466	\$27,466
2003-04	130,438	0	130,438	28,037	87,349	115,386
2004-05	201,247	0	201,247	89,243	134,619	223,862
2005-06	238,205	0	238,205	137,810	159,374	297,184
2006-07	342,866	0	342,866	163,475	229,159	392,634

These data demonstrate that if the Winthrop University can meet the projected student enrollments and contain costs as they are shown in the proposal, the program will be able to cover new costs with revenues it generates by the third year of its implementation.

In summary, Winthrop University will be the third public institution to offer an undergraduate degree in middle-level education. These new programs are needed to meet the new certification requirements recently passed by the State that are part of a larger statewide effort to improve teaching and learning in the middle grades. This program has been designed to provide teachers with the skills and knowledge to improve the academic achievement of middle school students.

Recommendation

The staff recommends that the Committee on Academic Affairs and Licensing commend favorably to the Commission approval of the program leading to the Bachelor of Science degree in Middle Level Education at Winthrop University for implementation in Spring 2003, provided that no “unique cost” or other special state funding be required or requested.

New Program Proposal
Bachelor of Science in Nuclear Engineering
South Carolina State University and the University of Wisconsin-Madison
(Joint Program)

Summary

South Carolina State University (SCSU) and the University of Wisconsin-Madison (UWM) request approval to offer jointly a new degree program leading to the Bachelor of Science in Nuclear Engineering, to be implemented in Fall 2002.

South Carolina State University's Board of Trustees approved the proposal on May 5, 2001. The provost at the University of Wisconsin-Madison signed an articulation agreement regarding the joint program with South Carolina State on July 24, 2000. In May 2002, CHE staff requested that the President of South Carolina State University and the Chancellor of the University of Wisconsin-Madison sign a Memorandum of Understanding stating the intention of both institutions to offer jointly the B.S. in Nuclear Engineering. The Commission staff received this document, signed by the appropriate representatives from both universities, on July 12, 2002.

The Commission's Advisory Committee on Academic Programs reviewed the proposal at its April 25, 2002, meeting and engaged in extensive discussions about the proposed new degree program. Members raised the following issues as potential concerns: 1) the ability of the state to fund another engineering program on an on-going basis; 2) the ability of the proposed program to obtain accreditation through the Accreditation Board for Engineering and Technology (ABET); 3) the ability of graduates from the program to obtain engineering licensure in South Carolina absent in-state collaboration with a currently accredited engineering program (i.e., The Citadel, Clemson, or USC-Columbia); 4) the need for a new joint program when students from South Carolina State can already obtain the Bachelor of Science in Nuclear Engineering from the University of Wisconsin-Madison as per SCSU's articulation agreement with UWM; and, 5) the absence of a formal Memorandum of Understanding between SCSU and UWM. The representative from the Medical University of South Carolina voiced strong support for the proposed joint program, noting that the program could provide an excellent opportunity to increase the number of African American engineers in South Carolina.

In response to these concerns raised by members of the Committee, representatives from South Carolina State noted that the program and others like it are viewed as a priority by the United States Department of Energy (DOE) as a means of preparing professional engineers to work in the reinvigorated nuclear power industry. Also, representatives from SCSU stated that the University is currently receiving \$250,000 per year over five years (fiscal years 2000-01 to 2005-06) to underwrite the

costs of the program and that a second five-year grant is forthcoming when the current grant expires in 2006. Also, the University intends to pursue additional private funding from donors such as SCANA on a continuing basis. In terms of accreditation concerns, representatives from SCSU stated that the University will pursue ABET accreditation in a timely fashion and that the University of Wisconsin-Madison would not risk its own ABET accreditation if it did not believe that SCSU could obtain accreditation. Representatives from South Carolina State agreed that collaboration between faculty at SCSU and USC-Columbia could prove beneficial in enabling graduates to pass licensure examinations in South Carolina. To this extent, representatives from SCSU pointed to discussions they have had with faculty and administrators at USC-Columbia on pooling resources in nuclear engineering to include faculty exchanges and articulation between the proposed baccalaureate degree program in nuclear engineering at SCSU and proposed graduate programs in nuclear engineering at USC-Columbia. Finally, in keeping with customary Commission policy, representatives from South Carolina State agreed to obtain a signed Memorandum of Understanding from the University of Wisconsin-Madison stipulating the intent to offer the proposed degree program in a joint fashion.

Subsequent to these lengthy discussions, the Advisory Committee on Academic Programs voted to approve the proposed Bachelor of Science degree in Nuclear Engineering at South Carolina State University and the University of Wisconsin-Madison with one Committee member, representing the University of South Carolina-Columbia, voting in opposition.

According to the proposal, the proposed B.S. in Nuclear Engineering will “prepare students to meet the technological needs of the nuclear power industry” and will give graduates the “knowledge and skills to plan, design, operate, and manage all aspects of a nuclear power facility.” South Carolina State cites a number of statistics that support the need for additional nuclear engineers to work in the nuclear industry, including the high number of nuclear power plants in South Carolina (seven), which ranks the state near the top nationally in terms of its reliance on nuclear power. The University argues that the need for nuclear engineers will continue to increase in the coming decade as “rising costs of electricity generated from fossil fuels will result in a resurgence of the nuclear power industry and plant construction on a global scale.” Furthermore, according to the proposal and to discussions held by the Commission staff with the director of the South Carolina Universities Research and Education Foundation (SCUREF), the United States Department of Energy (DOE) has set as a priority the training of minority nuclear engineers. To this extent, the DOE has provided South Carolina State with \$250,000 per year starting in fiscal year 2000-01 to help defray costs of the proposed new program as well as to help recruit minority students by providing full scholarships into this as well as other joint nuclear engineering programs around the nation.

The proposed B.S. in Nuclear Engineering at SCSU/UWM will be administered by the School of Engineering Technology and Sciences at SCSU and by the College of Engineering at UWM. The names of both institutions will appear on the diplomas

awarded to graduates from the program. A curriculum display provided by SCSU reveals that the proposed program will require 140 credits for graduation, 30 of which will be offered on campus at the University of Wisconsin-Madison and the remaining 90 of which will be offered on campus at South Carolina State.

Students will take courses offered at UWM in the summer semester of their junior year, the spring semester of their senior year, and the summer semester of their senior year. These courses include Reactor Operations, Nuclear Reactor Theory, Nuclear Reactor Lab, and Reactor Design. Importantly, students in the program will have access to a nuclear reactor on the campus of UWM; South Carolina State will not put in place a reactor on its campus.

Students will take all of the general education coursework, as well as much of the coursework in the major and in the electives areas, on campus at SCSU. Coursework is largely calculus-based, as is necessary for a rigorous engineering degree program, although students will enroll in some 39 credits of engineering technology coursework (as opposed to engineering coursework). Commission staff asked representatives from ABET whether this high number of credits in engineering technology would prove problematic for accreditation for the B.S. in Nuclear Engineering at SCSU/UWM and were told that accrediting teams would need to make sure that the engineering technology courses were of equivalent quality to engineering courses taken in other nuclear engineering programs at other institutions. Additionally, SCSU will offer six new courses, all of which will be taught on campus in Orangeburg: Engineering 212, Statics; Engineering 213, Strength of Materials; Engineering 313, Dynamics; Nuclear Engineering 305, Fundamentals of Nuclear Engineering; Nuclear Engineering 408, Ionizing Radiation; and, Nuclear Engineering 411, Nuclear Reactor Engineering.

At present, there are no other baccalaureate degrees in nuclear engineering in South Carolina. However, the University of South Carolina-Columbia is currently proposing to implement degree programs leading to the Master of Science and the Doctor of Philosophy in Nuclear Engineering. In the southeast, Georgia Institute of Technology, North Carolina State University, and the University of Tennessee offer baccalaureate degrees in the field.

In terms of accreditation, the Commission staff queried the Accreditation Board for Engineering and Technology (ABET) regarding the procedures that the B.S. in Nuclear Engineering at SCSU/UWM would need to follow to obtain accreditation. ABET representatives explained that the agency would not allow UWM, which currently holds ABET accreditation for its baccalaureate degree program in nuclear engineering, to cover SCSU in its accreditation. Instead, both SCSU and UWM would need to undergo new reviews—including new site visits—relative to the respective components of the proposed joint program for which they will have responsibility. South Carolina State University states definitively that it will seek accreditation as soon as possible under

ABET guidelines and that it anticipates receiving full accreditation for the joint B.S. in Nuclear Engineering.

Enrollments in the proposed new joint baccalaureate program in nuclear engineering are modest. South Carolina State anticipates new enrollments to start at five new students in year one of operation (academic year 2002-03) and increase by two additional students each year through year five of operation (academic year 2006-07). Thus, by year five, SCSU anticipates enrolling approximately 13 new students in the proposed joint B.S. in Nuclear Engineering, which meets the Commission's degree program productivity standards. SCSU projects that all students will enroll on a full-time basis.

To support the program, and especially the new coursework in nuclear engineering, SCSU has hired one new faculty member who holds a master's degree in nuclear engineering and is pursuing the doctorate in the field. Also, SCSU is currently in the process of negotiating with a prospective second faculty member with a Ph.D. in nuclear engineering. Salaries for both positions are underwritten by funds from the Department of Energy grant. Altogether, South Carolina State will devote five headcount faculty (3.5 full-time equivalent faculty) to the proposed program by academic year 2003-04.

South Carolina State does not anticipate the need to purchase new equipment or to modify or add facilities in order to implement the proposed new program. SCSU does plan on adding library holdings related to nuclear engineering to the extent needed to comply with American Library Association standards for a program the size of the proposed joint B.S. in Nuclear Engineering. Specifically, SCSU anticipates spending \$30,000 over the first five years of the program's operation to supplement its library holdings.

Shown below are the estimated Mission Resource Requirement (MRR) costs to the state and new costs not funded by the MRR associated with implementation of the proposed program for its first five years. Also shown are the estimated revenues projected under the MRR and the Resource Allocation Plan as well as student tuition.

Year	Estimated MRR Cost for Proposed Program	Extraordinary (Non-MRR) Costs for Proposed Program	Total Costs	State Appropriation	Tuition	Total Revenue
2002-03	\$79,709	\$0	\$79,709	\$0	\$26,685	\$26,685
2003-04	109,231	0	109,231	50,395	36,400	86,795
2004-05	138,753	0	138,753	69,327	46,114	115,441
2005-06	168,275	0	168,275	88,258	55,829	144,087
2006-07	197,797	0	197,797	107,190	65,924	173,114

These data demonstrate that if South Carolina State University can meet the projected student enrollments and contain costs as they are shown in the proposal, the program will not be able to cover new costs with revenues generated by state appropriations and tuition by the fifth year of its implementation. However, when federal (\$250,000 per year) and other private revenue funds to be solicited are accounted for, the program will likely be self-sufficient in the first year of its implementation.

In summary, the joint Bachelor of Science in Nuclear Engineering offered by South Carolina State University and the University of Wisconsin-Madison is a unique program in South Carolina, and, in many respects, a unique program nationally. If approved, it will stand as the first new baccalaureate degree program in nuclear engineering in the United States in over two decades. Additionally, the capacity of the program to attract minority students into the engineering profession could in time enable it to become a very positive attribute to the state and to the entire nuclear industry. Nevertheless, it will be important for South Carolina State to ensure high quality teaching and learning in the joint B.S. in Nuclear Engineering program. One chief measure of this ability will come in the form of SCSU's attainment of accreditation through ABET in a timely fashion. SCSU will need to make sure that the program can be funded adequately on an ongoing basis after the inevitable lapse of federal grant funding.

Recommendation

The Committee recommends that the Commission approve the joint Bachelor of Science in Nuclear Engineering at South Carolina State University and the University of Wisconsin-Madison for implementation in Fall 2002, provided that no "unique cost" or other special state funding be required or requested.

New Program Proposal
Master of Arts in Arts Administration
Winthrop University

Summary

Winthrop University requests approval for a new program leading to the Master of Arts in Arts Administration degree, to be implemented in August 2003.

The University's Board of Trustees approved the proposal on April 12, 2002. The Commission's Advisory Committee on Academic Programs reviewed the proposal at its July 25, 2002, meeting, and without substantive comment, voted unanimously to approve the program.

According to the proposal, the purpose of the M.A. in Arts Administration is to "prepare arts administrators and arts professionals to manage and effectively participate in complex not-for-profit cultural organizations." Graduates from the proposed degree program will be able to find employment in institutions such as museums, arts centers, dance companies, orchestras, performing arts centers, theatre ensembles, and other not-for-profit organizations. The Colleges of Visual and Performing Arts and the College of Business Administration at Winthrop will co-administer the proposed new program since the program will combine faculty and coursework from both colleges.

Winthrop envisions attracting students from all along the east coast and believes that most students will be working professionals. For this reason, the M.A. in Arts Administration will be configured in a non-traditional fashion, meaning that the University will offer coursework leading toward the degree on weekends, in summers, and via the Internet in order to reach students who are employed full-time. Additionally, the University will enroll students in cohort groups of nine to twelve students each and will run two cohorts at a time, staggering these groups on an annual basis. Thus, the program will never enroll more than 18 to 24 full-time students at one time. In keeping with the attempt to appeal to working students, the curriculum for the proposed degree program will be comprised of 18 weekend sessions offered each month in the academic year and worth one credit hour, two one-week summer institutes worth three credits hours each, and two web-based thesis courses worth six credit hours. Students will complete 36 credits hours for graduation; the program will take two academic years to complete.

Coursework in the program is purposely geared toward combining subject matter in arts administration (e.g., Principles and Practices of Arts Administration and Aesthetics, Theory, and Criticism of the Arts) with subject matter in business, finance, and marketing (e.g., Marketing the Arts and Financial Analysis, Planning, and Management). Technically, all of the courses required for implementation of the M.A. in

Arts Administration are new to the Winthrop curriculum. However, most of the courses borrow from existing courses currently taught at the University. Also, due to non-traditional schedule of the program, only students enrolled in the M.A. in Arts Administration will be able to take courses identified with the program.

Currently, no other public or private institution in South Carolina offers a degree program in arts administration. The College of Charleston offers a B.A. in Arts Management, as do Erskine College and Newberry College. Nationally, Bank Street College in New York City, the Art Institute of Chicago, Eastern Michigan University, Ohio State University, and the University of Akron offer master's programs that could be considered as competitors with the proposed M.A. in Arts Administration at Winthrop.

While the proposal stipulates that no accrediting body exists relative to the M.A. in Arts Administration, representatives from Winthrop stated at the July 25, 2002, meeting of the Advisory Committee on Academic Programs that they would pursue accreditation through the National Association of Schools of Art and Design (NASAD).

Enrollment in the proposed M.A. program will begin with nine full-time equivalent students (FTE's) in Fall 2003. This group of students will comprise the first cohort in the program. In Fall 2004, the second cohort of students will begin the program, thereby raising the enrollment to 18 FTE's, where Winthrop projects it will remain. All students will be required to enroll in nine credits in fall and spring semesters and six credits during the one summer semester.

The proposed new program will draw existing faculty from both the College of Visual and Performing Arts and the College of Business Administration at Winthrop. The University anticipates hiring a new director for the program in 2003-04 whose faculty load will be split between administration of the program and teaching (0.50 FTE in each). Additionally, the University will hire a 0.50 FTE staff member to assist with administration of the program in 2003-04.

According to the proposal, there is no requirement for additional facilities space to implement the M.A. in Arts Administration program. The University does plan on purchasing a new computer for the director of the program and will increase library expenditures in the fine arts and business by \$17,500 over the first five years of the program's operation to cover necessary enhancements to the collection in support of the program.

Shown below are the estimated Mission Resource Requirement (MRR) costs to the state and new costs not funded by the MRR associated with implementation of the proposed program for its first five years. Also shown are the estimated revenues projected under the MRR and the Resource Allocation Plan as well as student tuition.

Year	Estimated MRR Cost for Proposed Program	Extraordinary (Non-MRR) Costs for Proposed Program	Total Costs	State Appropriation	Tuition	Total Revenue
2003-04	\$184,590	\$0	\$184,590	\$0	\$57,936	\$57,936
2004-05	369,180	0	369,180	123,057	115,872	238,929
2005-06	369,180	0	369,180	246,113	115,872	361,985
2006-07	369,180	0	369,180	246,113	115,872	361,985
2007-08	369,180	0	369,180	246,113	115,872	361,985

These data demonstrate that if Winthrop can meet the projected student enrollments and contain costs as they are shown in the proposal, the program will not be able to cover new costs with revenues it generates by the fifth year of its implementation.

In summary, Winthrop should be commended for developing a program that meets a clear market niche and for conceptualizing the Master of Arts in Arts Administration in such a fashion as to appeal to working adults who could benefit most from the coursework in the program. The curriculum is well conceived, and additional costs for the program are minimal. The cohort plan of instruction should prevent the program from growing beyond the bounds of reasonable faculty/student ratios.

Recommendation

The staff recommends that the Committee on Academic Affairs and Licensing commend favorably to the Commission approval of the program leading to the Master of Arts degree in Arts Administration at Winthrop University for implementation in August 2003, provided that no “unique cost” or other special state funding be required or requested.

New Program Proposal
Master of Education in Languages
College of Charleston

Summary

The College of Charleston requests approval to offer a program leading to the Master of Education degree in Languages with concentrations in Spanish, French, Latin, and English for Speakers of Other Languages (ESOL), to be implemented in Spring 2003.

The Board of Trustees approved this proposal on April 30, 2003. This proposal was submitted for Commission review on May 15, 2002. The proposal was reviewed without substantive comment and voted upon favorably by the Advisory Committee on Academic Programs at its meeting on July 25, 2002.

The purpose of the proposed program is to provide Lowcountry foreign language teachers with a program to improve their skills, knowledge, and competencies in accordance with the standards of the National Board for Professional Teaching. The proposed program has been designed to offer concentrations in Spanish, French, Latin, and English for Speakers of Other Languages (ESOL) and will allow teachers to acquire add-on certification in these areas.

The need for the program is based on a March 2001 survey of public and private school language teachers as well as from comments from participants in the Lowcountry Institute for Language Teachers (held at the College of Charleston each summer). The proposal indicates that there is high interest among teachers for an advanced degree in the College's service area. The nearest master's level degree for foreign language teachers is USC-Columbia's Inter-disciplinary Master of Art (I.M.A.) program. The survey indicated that of the nearly 300 respondents, teachers preferred a degree to be offered within a one hour's drive of their homes and one that could be taken part-time (evenings/summer). No quantitative data from the survey were presented in the proposal. The ESOL option will be the first such program in the State and will meet the add-on certification requirements of the S.C. Department of Education.

The only other program in the State that is similar in scope is USC-Columbia's I.M.A. degree program which differs from the proposed M.Ed. in the number of core education courses (nine credit hours versus 15 credit hours for the M.Ed.) and the number of language-specific courses (21 credit hours for the I.M.A. versus 15 for the M.Ed.). In addition, the proposed ESOL concentration requires 50 hours of field-based experiences.

The curriculum consists of a minimum of 36 credit hours. Of these, at least 15 credit hours will be in the core education and linguistics curriculum, 15 credit hours will be in language-specific courses, and six will be electives. Students will be required to pass a comprehensive exam at the end of the program. Concentrations will be offered in Spanish, French, Latin, and English for Speakers of Other Languages (ESOL). All students will develop a plan of study that will be designed for their specific language of study. The proposed curriculum has been designed to address the five core propositions of the National Board for Professional Teaching Standards, the standards of the National Council for the Accreditation of Teacher Education, and the standards of Teachers of English as a Second Language (TESOL) and American Council on the Teaching of Foreign Languages (ACTFL). Twenty-five new courses will be required for the proposed program. Because the College anticipates offering the degree program on a part-time basis, courses will be developed over the next four to five years. Costs of course development will come from the Division of Languages' research and development budget as well as from grants from the College's Center for Excellence in Teaching and Learning.

One new full-time tenure-track position will be required in the first year of the program. During the second year of the program, two new adjunct faculty (.50 FTE) will be hired. A Program Director will be appointed from current faculty and will receive one-course release time. Nine headcount faculty (2.5 FTE) will serve the program in FY 2003-04 and will increase to 11 headcount faculty (3.0 FTE) in FY 2004-05 and remain at that level for the remainder of the first five years.

Enrollment in the proposed program is based on examination of enrollment at other national M.Ed. programs and enrollment in USC's I.M.A. degree program. There are approximately 300 foreign language teachers in the College's service area. Enrollment in the proposed program is estimated to begin at 40 headcount students in FY 2003-04 and increase to 56 headcount students in FY 2007-08. All of these students will be part-time. If the enrollment projections are met, the program will meet the current CHE program productivity standards.

There are no physical plant or equipment needs for the proposed program. The library holdings exceed the standards of the Association of College and Research Libraries by 64%. However, the proposal indicates that there will be a need to enhance the holdings in linguistics and language pedagogy. Acquisition of these will occur in the first two years of the program through an additional \$5000 in funds for the library. The new costs are associated with the hiring of additional faculty. New costs begin at \$37,625 in FY 2003-04 and include \$31,625 in salaries and \$6,000 for the library and supplies/materials. These costs will increase to \$77,631 in FY 2006-07 and include \$76,631 in salaries and \$1,000 for supplies/materials for a total five- year new costs of \$337,753.

The proposed program will be subject to accreditation by the National Council for the Accreditation of Teacher Education (NCATE) under the State's NCATE partnership. Teachers completing the proposed program will be eligible for add-on certification from the S.C. Department of Education.

Shown below are the estimated Mission Resource Requirement (MRR) costs to the state and new costs not funded by the MRR associated with implementation of the proposed program for its first five years. Also shown are the estimated revenues projected under the MRR and the Resource Allocation Plan as well as student tuition.

Year	Estimated MRR Cost for Proposed Program	Extraordinary (Non-MRR) Costs for Proposed Program	Total Costs	State Appropriation	Tuition	Total Revenue
2003-04	\$239,993	\$0	\$239,993	\$0	\$85,662	\$85,662
2004-05	327,263	0	327,263	183,647	117,256	300,903
2005-06	327,263	0	327,263	249,958	117,256	367,213
2006-07	327,263	0	327,263	249,958	117,256	367,213
2007-08	327,263	0	327,263	249,958	117,256	367,213

These data demonstrate that if the College of Charleston can meet the projected student enrollments and contain costs as they are shown in the proposal, the program will be able to cover new costs with revenues it generates by the third year of its implementation.

In summary, the College of Charleston proposes to offer an advanced degree program for teachers of foreign languages. This will be the only program of its kind in the State and will allow teachers to enhance their teaching and content knowledge. As a critical need teaching area, it is very important to offer practicing teachers of foreign languages additional support. This proposed program will allow the professional growth of these teachers in addition to providing support to those seeking National Board Certification. Such support is critical in retaining high quality teachers.

Recommendation

The staff recommends that the Committee on Academic Affairs and Licensing commend favorably to the Commission approval of the program leading to the Master of Education degree in Languages with concentrations in Spanish, French, Latin, and English for Speakers of Other Languages (ESOL), for implementation in Spring 2003, provided that no "unique cost" or other special state funding be required or requested.

New Program Proposal

Master of Engineering in Nuclear Engineering
Master of Engineering in Nuclear Engineering (APOGEE)
Master of Science in Nuclear Engineering
Master of Science in Nuclear Engineering (APOGEE)
Doctor of Philosophy in Nuclear Engineering
Doctor of Philosophy in Nuclear Engineering (APOGEE)

University of South Carolina-Columbia

Summary

The University of South Carolina-Columbia requests approval to offer four new master's degree programs in nuclear engineering and two new doctoral degree programs in nuclear engineering, to be implemented in Fall 2002. (Given the fact that the programs are very similar in nature at their respective degree levels, the Commission agreed to treat them together for purposes of program approval.)

The University's Board of Trustees approved the proposal on April 26, 2002. The Commission's Advisory Committee on Academic Programs reviewed the proposal at its April 25, 2002, meeting and, without substantive comment, voted unanimously to approve the programs.

According to the proposal, the purpose of these proposed new degree programs is "to educate engineers who will develop and manage the resurgent nuclear industry in research, design, and operation." Additionally, the proposal states that the programs' objectives "are to develop graduate-level engineers who have the ability to develop new concepts of reactor design, fuel management, and waste management." The University cites extensive data showing the growing need for professional engineers with graduate degrees in nuclear engineering in the nuclear industry, including a study by the Nuclear Engineering Department Heads Organization showing a demand to supply ratio for baccalaureate and master's trained nuclear engineers of 3.6. Also, the proposal notes that in order to offset the deficit of trained nuclear engineers at the graduate level, the federal government "is undertaking extensive programs to support graduate students in the nuclear field," of which USC-Columbia is a beneficiary.

The proposed new programs will be administered by the Department of Mechanical Engineering in the College of Engineering and Information Technology. The curriculum for the master's programs will require approximately 31 credits hours for graduation with the main difference between the Master of Science (M.S.) degree programs and the Master of Engineering programs (M.E.) coming in the form of a thesis

requirement for the M.S. programs. The APOGEE programs are simply distance delivered versions of the same M.S., M.E., and Ph.D. programs that are offered on campus. USC will require graduates of the Master of Science and Master of Engineering programs to complete 16 credit hours in a core area that includes coursework such as Introduction to Nuclear Engineering, Nuclear Fuel Cycles, and Radiation Shielding. Additionally, M.S. graduates will need to take another nine credit hours of electives in nuclear engineering coursework and six credit hours devoted to the thesis. Master of Engineering graduates take 15 credit hours of pertinent electives beyond the core.

Students pursuing the doctoral degree program (either by traditional means or via APOGEE) must complete 18 credit hours of coursework in nuclear engineering beyond the master's degree followed by 12 credits hours of dissertation preparation "leading to a dissertation based on independent research."

The University will add the following seven new courses to its curriculum in order to implement the proposed new master's and doctoral programs in nuclear engineering: EMCH 555, Instrumentation for Nuclear Engineering; EMCH 555L, Nuclear Engineering Laboratory; EMCH 755, Advanced Nuclear Engineering; EMCH 756, Safety Analysis for Energy Systems; EMCH 757, Radiation Shielding; EMCH 758, Nuclear Reactor Systems; and, EMCH 759, Waste Management in the Nuclear Industry.

Applicants to either the master's programs or the doctoral programs are expected to possess a baccalaureate degree in engineering or a closely related field. According to the proposal, students with backgrounds in mechanical engineering or chemical engineering will likely have the strongest backgrounds for study of nuclear engineering, although students with varied engineering and science backgrounds (e.g., physics, other engineering fields) could be successful in the programs.

At present, there are no other graduate programs in nuclear engineering in South Carolina. Clemson University offers a component in its master's and doctoral programs in environmental engineering that focuses on the environmental effects of nuclear radiation, but there are no stand-alone programs in nuclear engineering at the graduate level currently offered in the state. There are graduate programs in nuclear engineering at the University of Tennessee, North Carolina State University, Georgia Tech, and the University of Florida. It is important to note, too, that South Carolina State University is proposing to offer a joint Bachelor of Science degree in Nuclear Engineering with the University of Wisconsin-Madison. If the proposed B.S. in Nuclear Engineering at SCSU/UWM is approved by the Commission, the staff strongly recommends that South Carolina State and USC-Columbia work together in a meaningful fashion to enhance teaching and learning on both campuses, including providing avenues of matriculation for qualified students from the joint baccalaureate program at South Carolina State into the proposed master's programs in nuclear engineering at USC-Columbia.

USC-Columbia projects modest new enrollments in the master's programs. Headcount enrollments in the M.S., M.E., and master's degree APOGEE programs *together* will start at approximately four new students in Fall 2002 and increase to approximately 30 new students by year five of operation, academic year 2006-07. USC believes that some part-time students will enroll in the programs—especially the APOGEE programs—and thus bases its credit hour production in the master's programs on students taking ten credit hours per semester.

Enrollments in the doctoral programs are also slated to be rather small, starting with one headcount student in Fall 2002 and increasing to ten students by Fall 2006. Again, these numbers correspond to both the on-campus Ph.D. in Nuclear Engineering as well as the proposed APOGEE program. As with the master's programs, USC projects students will take approximately ten credit hours per semester.

For purposes of the Commission's degree program productivity and existing academic program review mechanisms, the four master's programs in nuclear engineering will be considered together in terms of enrollments and graduates, as will the two doctoral programs.

USC will add two new faculty members to the Department of Mechanical Engineering to support the proposed new programs. The first individual will be hired at the associate professor level in academic year 2002-03 and "will be expected to have significant experience in both research and teaching in the nuclear field." The second faculty member will be hired at the assistant professor level and will be expected to teach in the areas of reactor safety and nuclear waste management. Existing faculty in the Departments of Mechanical, Chemical, and Electrical Engineering at USC will also teach in the program.

The University does not anticipate the need for additional physical plant requirements specific to the proposed new programs, although it does believe that addition of the nuclear engineering programs will require the purchase of some new equipment. To this extent, USC-Columbia is budgeting \$105,000 in new equipment costs over the first five years of the programs' operation. Most of this amount will come from United States Department of Energy matching funds (totaling \$276,000 over the first five years of the programs' lives), which will help pay for specialized nuclear detection equipment needed for the programs. Additionally, USC foresees the need to supplement its library resources in nuclear engineering and will increase the library budget of the Department of Mechanical Engineering by approximately \$11,000 over the first five years of operation. The only other additional costs associated with the new programs come in the form of additional salaries for new faculty (approximately \$666,000 over the first five years) and for new graduate assistants (approximately \$80,000 over the first five years).

USC will seek accreditation for the master's programs through the Accreditation Board for Engineering Technology (ABET). ABET accredits only the first degree awarded in a field by any institution (in this case, the MS and ME programs in nuclear engineering). Since ABET requires that a program produce at least one graduate before it is considered for accreditation, USC anticipates seeking accreditation in late 2003 or early 2004, just after it graduates the first students from the master's programs. All other eligible programs in the College of Engineering and Information Technology at USC-Columbia are currently accredited by ABET.

Shown below are the estimated Mission Resource Requirement (MRR) costs to the state and new costs not funded by the MRR associated with implementation of the proposed *master's* programs for their first five years of operation. Also shown are the estimated revenues projected under the MRR and the Resource Allocation Plan as well as student tuition.

Year	Estimated MRR Cost for Proposed Program	Extraordinary (Non-MRR) Costs for Proposed Program	Total Costs	State Appropriation	Tuition	Total Revenue
2002-03	\$106,167	\$0	\$106,167	\$0	\$26,631	\$26,631
2003-04	159,250	0	159,250	58,598	39,492	98,090
2004-05	244,183	0	244,183	86,179	61,412	147,591
2005-06	456,517	0	456,517	132,971	114,220	247,191
2006-07	668,850	0	668,850	248,449	167,029	415,478

These data demonstrate that if USC-Columbia can meet the projected student enrollments and contain costs as they are shown in the proposal, the programs will not be able to cover new costs with revenues they generate by the fifth year of their implementation.

Shown below are the estimated Mission Resource Requirement (MRR) costs to the state and new costs not funded by the MRR associated with implementation of the proposed *doctoral* programs for their first five years of operation. Also shown are the estimated revenues projected under the MRR and the Resource Allocation Plan as well as student tuition.

Year	Estimated MRR Cost for Proposed Program	Extraordinary (Non-MRR) Costs for Proposed Program	Total Costs	State Appropriation	Tuition	Total Revenue
2002-03	\$106,483	\$0	\$106,483	\$0	\$10,959	\$10,959
2003-04	248,461	0	248,461	58,664	24,728	83,392
2004-05	425,933	0	425,933	136,437	42,844	179,281
2005-06	780,878	0	780,878	232,776	78,532	311,308
2006-07	780,878	0	780,878	427,877	78,532	506,409

These data demonstrate that if USC-Columbia can meet the projected student enrollments and contain costs as they are shown in the proposal, the programs will not be able to cover new costs with revenues they generate by the fifth year of their implementation.

In summary, the proposed new master's and doctoral programs in nuclear engineering at the University of South Carolina-Columbia will provide a much-needed course of study at the graduate level for an important and growing cohort of professional engineers. Given the state's reliance on nuclear power and the increasing needs of the nuclear industry for well-trained engineers and managers, these proposed new programs will no doubt play an important role in the industry as soon as they are implemented. The University is to be commended for adequately supporting the programs and for making them accessible, especially through the APOGEE program, to working professionals.

Recommendation

The Committee recommends that the Commission approve the following programs at the University of South Carolina-Columbia for implementation in Fall 2002, provided that no "unique cost" or other special state funding be required or requested:

Master of Engineering in Nuclear Engineering
Master of Engineering in Nuclear Engineering (APOGEE)
Master of Science in Nuclear Engineering
Master of Science in Nuclear Engineering (APOGEE)
Doctor of Philosophy in Nuclear Engineering
Doctor of Philosophy in Nuclear Engineering (APOGEE)

New Program Proposal
Master of Science in Coastal Marine and Wetland Studies
Coastal Carolina University

Summary

Coastal Carolina University requests approval to offer a program leading to the Master of Science degree in Coastal Marine and Wetland Studies, to be implemented in Fall 2003.

The Board of Trustees approved the proposal on May 10, 2002. This proposal was submitted for Commission review on May 15, 2002. The proposal was reviewed without substantive comment and voted upon favorably by the Advisory Committee on Academic Programs at its meeting on July 25, 2002.

The purpose of the program is to provide an advanced degree focused on coastal resources tied to the coastal and wetland environments of the Horry County area. Because of the expanded growth in the region, the University notes that there is a need for individuals trained in understanding coastal development and the natural resources of the coastal environment.

The need for the program is based on annual inquiries from students seeking an advanced degree in coastal marine studies. The proposal indicates that the University receives three to five inquiries per year from non-Coastal students. In addition, Coastal Carolina Marine Science majors have expressed a strong interest in a graduate-level program at Coastal Carolina. The proposal also cites the U.S. Department of Labor, Bureau of Labor Statistics in its job forecast for Master's level professionals in environmental fields. No quantitative data were supplied to demonstrate the need for the proposed program.

There are two graduate-level degree programs in the area of marine science in the State. The University of South Carolina-Columbia and the College of Charleston both have master's level programs. The Coastal Carolina proposed program differs somewhat from these two programs in its focus on coastal and wetland studies. While the other two programs have components of coastal and wetland studies, these areas are not their primary focus. The proposal indicates that the proposed program will continue to collaborate with USC faculty and students on joint research at the Belle W. Baruch Marine Field Laboratory in Georgetown.

The curriculum consists of 30 credit hours. Of these, nine credit hours are in the core curriculum, six credit hours in thesis research, three credit hours in graduate seminars, and 12 credit hours in electives. All students are required to defend a thesis

based on original research and all must participate in the seminar series. Twenty-two new courses will be required for this program. The proposal indicates that these courses will be developed over the next five years.

One new faculty member will be required in the third year of the program. Faculty supporting the program will begin at 12 headcount (1.33 FTE) in FY 2002-03 and will increase to 24 headcount faculty (2.66 FTE) in FY 2006-07. Faculty teaching in the graduate program will have their teaching load adjusted accordingly. No other changes in faculty assignments are anticipated.

Enrollment in the proposed program is estimated to begin at seven headcount students in FY 2002-03 and increase to 19 headcount students in FY 2006-07. The proposal indicates that enrollment estimates are based on the number of inquiries the University receives annually regarding a graduate-level program as well as the anticipated graduation rate, number of graduate course offerings, and level of faculty participation. If the enrollment projections are met, the program will meet the current CHE program productivity standards.

There are minor physical plant and equipment costs required for the proposed program. Physical plant requirements entail restructuring rooms for graduate office space. A quantitative comparison of the library's holding in marine science was conducted using the standards of the Association of College and Research Libraries. The University chose the University of North Carolina at Wilmington for a peer comparison. The results of the comparison indicated a need to add approximately 1,500 titles. There will be an allocation of \$44,700 to increase the holdings over the next five years with nearly one half of the acquisitions occurring in the first year. New costs are estimated to begin at \$62,600 in FY 2002-03 and include \$29,500 for salaries, \$20,000 for library resources, and \$13,100 for graduate student office space, supplies/travel, and equipment (\$2,000). The costs increase to \$153,500 in FY 2006-07 and include \$117,600 in salaries, \$7,400 for library resource, and \$28,500 for supplies/travel and equipment (\$5,000). The total estimated five-year cost is \$604,500.

There is no specialized accreditation available for the proposed program.

Shown below are the estimated Mission Resource Requirement (MRR) costs to the state and new costs not funded by the MRR associated with implementation of the proposed program for its first five years. Also shown are the estimated revenues projected under the MRR and the Resource Allocation Plan as well as student tuition.

Year	Estimated MRR Cost for Proposed Program	Extraordinary (Non-MRR) Costs for Proposed Program	Total Costs	State Appropriation	Tuition	Total Revenue
2002-03	\$106,849	\$0	\$106,849	\$0	\$14,735	\$14,735
2003-04	213,699	0	213,699	81,517	29,106	110,623
2004-05	251,613	0	251,613	160,914	35,114	196,028
2005-06	286,080	0	286,080	191,533	39,478	231,011
2006-07	286,080	0	286,080	216,982	39,478	256,459

These data demonstrate that if Coastal Carolina University can meet the projected student enrollments and contain costs as they are shown in the proposal, the program will not be able to cover new costs with revenues it generates by the fifth year of its implementation.

In summary, Coastal Carolina University proposes to offer a program designed to meet the growing need of the Horry County region for individuals trained in coastal scientific and policy issues that are confronting the communities along the South Carolina coast. Graduates of the program will have an interdisciplinary background that will make them desirable for employment opportunities in the environmental sector.

Recommendation

The staff recommends that the Committee on Academic Affairs and Licensing commend favorably to the Commission approval of the program leading to the Master of Science degree in Coastal Marine and Wetland Studies at Coastal Carolina University, to be implemented in Fall 2003, provided that no “unique cost” or other special state funding be required or requested.

New Program Proposal
Master of Science in Physician Assistant Studies
Medical University of South Carolina

Summary

The Medical University of South Carolina requests approval to offer a program leading to the Master of Science degree in Physician Assistant Studies, to be implemented in May 2003.

The proposed program will replace the existing Bachelor of Science degree program in Physician Assisting currently operating at MUSC. The proposed program received institutional administrative approval on January 23, 2002. The MUSC Board of Trustees approved it on February 8, 2002. It was received by the Commission for review on February 13, 2002, and was approved without substantive comment by the Advisory Committee on Academic Programs (ACAP) on July 25, 2002.

The purpose of the program is to prepare entry-level Physician Assistants for the healthcare workforce with a credential considered increasingly to be appropriate to the field. Physician Assistants are most often compared to Primary Care Nurse Practitioners as fellow “physician extender” professionals. Because of the scope of responsibility of a physician assistant, and because Nurse Practitioners are prepared only at the master’s level, the master’s degree is seen as appropriate for the practitioners of Physician Assisting. The proposed program will give entry-level Physician Assistants the credential which is commensurate with the level of their educational achievement and professional responsibility. It will also place them in an equitable position vis-à-vis their peers in related professions.

As do the existing bachelor’s level degree program (instituted in 1994) in this field and the existing master’s-level track in Physician Assisting in the Master of Health Science degree (implemented as a “program modification” in 1998 as a way for bachelor’s-educated Physician Assistants to become master’s-prepared in the field), this proposed degree program is appropriate to the mission of the institution as a university health science center. The need for the program is said to be great in South Carolina and throughout the United States. Last year there were 275 qualified students who applied for the 45 openings in the current bachelor’s-level degree program in this field. Nationally, Bureau of Labor Statistics show great demand for Physician Assistants through the current decade. According to those projections, the demand for Physician Assistants will exceed the demand for most other professions in this decade. The growth of Physician Assistant programs of study in the United States is evidence of that demand. In the 1960s only one program (at Duke University) existed; today there are 130

accredited programs. Sixty-seven of the 130 are at the master's degree-level. The numbers of programs at the master's degree-level has risen 200% since 1994.

For acceptance into the program a student must already have completed at least 90 semester hours of acceptable course credit from an accredited institution of higher education. The proposed program will consist of 111 semester hours offered at the Medical University of South Carolina. Most of these courses are already part of the Medical University's existing B.S. in Physician Assisting program of study. All coursework in the proposed program will be given graduate-level numbering. A total of six new courses will be added to the catalog by the Medical University of South Carolina in order to deliver this program. Two courses which are currently part of the undergraduate program will be deleted from the program offerings of the M.S. in Physician Assisting program.

If approved, this program will be the only degree program of its type in South Carolina; the bachelor's degree program will be phased out at the same time that this degree program is implemented. The master's track in Physician Assisting in the Master of Health Science (MHS) degree will, however, be retained for persons who were trained at the bachelor's level in Physician Assisting and now desire to become master's-prepared.

Several reasons are advanced in the proposal for why this new program is being requested. These are: 1) the national association is circulating a white paper stating that Physician Assistants should be trained at the master's-level; 2) for the sake of peer interactions with nurse practitioners especially and other health care professionals, a master's degree is preferable; and 3) expanded knowledge makes the master's level a fitting one for the placement of this degree program.

MUSC projects a student population for this program of 45 (48.75 FTE) within the first year, rising to 90 (118 FTE) in the second year and thereafter.

According to the program proposal, additional costs for the new program will amount only to \$30,000 for the first five years of the program's operations. These costs will be solely for supplies and materials. No additional funding for faculty salaries, facilities, clerical support/personnel, library resources, equipment, or student assistants/peer tutors is said to be necessary, given the existence of the bachelor's program which will be, in essence, elevated to the master's level.

Shown below are the estimated projections of existing and any new costs associated with implementation of the proposed program for its first five years as compared with the estimated revenues projected under the Mission Resource Requirement and the Resource Allocation Plan.

Year	Estimated MRR Cost for Proposed Program	Extraordinary (Non-MRR) Costs for Proposed Program	Total Costs	State Appropriation	Tuition	Total Revenue
2003-04	\$3,527,449	\$0	\$3,527,449	\$0	\$741,370	\$741,370
2004-05	5,268,155	0	5,268,155	1,717,188	1,107,383	2,824,571
2005-06	6,215,029	0	6,215,029	2,564,297	1,306,355	3,870,652
2006-07	6,215,029	0	6,215,029	3,025,607	1,306,356	4,331,963
2007-08	6,215,029	0	6,215,029	3,025,607	1,306,356	4,331,963

These data demonstrate that even if MUSC can meet the projected student enrollments and contain costs as they are shown in the proposal, the program will not cover new costs with revenues it generates throughout the first five years of its implementation. Nevertheless, the institution is committed to providing the program the operating funds it needs to be successful.

In summary, the program is said to be needed in order to meet national trends in the preparation of physician assistants. It has been supported by MUSC's administration, the institution's Board of Trustees, and the Advisory Committee on Academic Programs without reservation. Finally, it shows continued promise for recruitment/retention of students and employment of graduates. The elevation of the program to the master's level is in keeping with the institution's commitment to become virtually a graduate program-only institution. The cost per FTE student in this master's level course will be significantly greater to the state from what the program had cost as a bachelor's-level degree, but funding at the higher master's-level will benefit the institution. However, out-of-state students will pay lower tuition, because of the Medical University's unique structure of tuition which is higher for out-of-state undergraduates than for out-of-state graduate students in the College of Health Professions.

Recommendation

The staff recommends that the Committee on Academic Affairs and Licensing commend favorably to the Commission approval of the program leading to the Master of Science degree in Physician Assistant Studies at the Medical University of South Carolina for implementation in May 2003, provided that no "unique costs" or other special state funding be required or requested, and provided further that the bachelor's level degree program is phased out simultaneously with the implementation of the new M.S. degree program.